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ABSTRACT

A plan is provided for a lesson on disk operating systems (DOS) for managers. Twenty-five lesson objectives are listed, followed by suggestions for learning activities and special resources. In the presentation section, key points and content are provided for 25 instructional topics that correspond to the 25 lesson objectives. The topics are as follows: hardware, hardware and software definitions, disk operation systems, bootstrap procedures, DOS command types, common filenames and extensions, general format DOS commands, disk and disk drives, FORMAT, disk handling techniques, changing logical drives, DIR command, TYPE command, creating and deleting subdirectories, changing directories, copying files, erasing files, proper file management techniques, the prompt line, COMMAND.COM and AUTOEXEC.BAT, COM: and LPT1:, redirection of standard input/output, batch files, how to run an unknown program, and other DOS commands. A DOS feedback instrument (student evaluation), master feedback instrument (answer key), and DOS attitude feedback instrument are also provided. (YLB)

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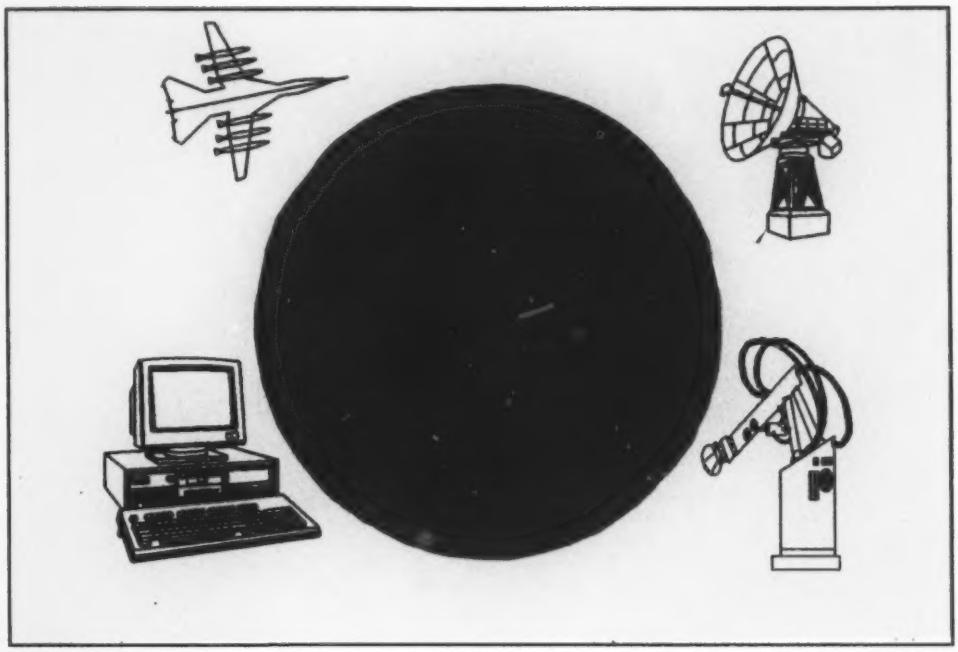
ED344029

MANAGEMENT TRAINING SERIES

"DOS FOR MANAGERS"



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CE 060 778

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INFORMATION LESSON PLAN

I. **Unit:** Management Training Series

II. **Lesson Title:** "DOS for Managers"

III. **Lesson Number:** 1

IV. **Lesson Objectives:** At the completion of this lesson, the student should be able to:

1. Identify the hardware components of a P.C. computer system.
2. Define hardware and software.
3. Identify three types of disk operating systems.
4. Understand what occurs during a bootstrap procedure.
5. Understand the difference between DOS resident commands and DOS programs.
6. Identify common filenames and extensions, and whether an extension is a batch file extension, a program extension, or an ASCII file extension.
7. Identify the general format for DOS commands.
8. Identify the different types and sizes of disk drives and diskettes.
9. Understand what the FORMAT command does, and be able to correctly format a disk in a disk drive.
10. List and practice the proper handling techniques for disks.
11. Change from one logical drive to another.
12. Define and use the DIR command.
13. Define and use the TYPE command.
14. Create and remove subdirectories.
15. Change from one logical subdirectory to another.
16. Copy files / disks using the COPY, XCOPY, and DISKCOPY commands.
17. Erase files.
18. Identify proper file management techniques.

IV. **Lesson Objectives:** (continued)

19. Identify and understand the prompt command line.

20. Identify what is contained in the command.com and autoexec.bat files.

21. Identify the COM: and LPT1: devices.

22. Redirect standard input/output.

23. Create simple batch files.

24. List the procedure necessary to run an unknown program on a disk, without any hardcopy instructions.

25. Define and be able to use the following DOS commands:

SYS	RENAME	VER	CHKDSK
COMP	TIME	VERIFY	SUBST
SORT	PROMPT	BACKUP	CLS
DATE	DISCOMP	PATH	PRINT

V. **Learning Activities:**

1. Take notes on lectures presented by Instructor.

2. Participate in class discussions of presented lecture materials.

3. Complete hands-on exercises presented by Instructor.

4. Complete the DOS feedback instrument with a minimum score of 80%.

VI. **Special Resources:**

MS/PC DOS on the IBM P.C. and Compatibles, J.Arnston & M. Auvil, 1989, PWS - Kent Publishing Company, Boston, MA, Chapters 1-7, 11-15.

VII. **Presentation:**

A. Introduction

1. Introduce to the student the importance of DOS principles for any work on IBM P.C's.

B. Instructional Topics and Key Points

TOPIC	KEY POINT
1. Hardware	1a. Definition - Anything you can touch. 1b. Components of a basic computer system: **computer** - microprocessor, power supply, data buses, RAM, and ROM. **Microprocessor** - brains of computer (8086,80286,80386 & also mention math co-processors). **Power supply** - 120VAC to 5 VDC. Data buses - serial and parallel. **RAM** - random access memory, volatile, where your program is stored, measured in kilobytes and megabytes where 1 byte = 1 character = 8 bits. **ROM** - read only memory, nonvolatile, where a portion of DOS is stored, contents of memory can only be read from and not written to. **Keyboard** - input device, looks like a typewriter (explain differences). **Monitor** - aka screen, VDT, CRT. output device similar to a tv. (explain differences between screen and tv. **Printer** - output device, makes makes a hardcopy of output to paper. (explain different types of printers). **Disk Drives** - mechanism which allows for the storage and retrieval of files to and from disks. (go over types of disk drives). Also include hard drives. 1c. Other Hardware components: Mouse, digitizer, magnetic tape plotters, light pens, modem, etc.
2. Hardware and software definitions	2a. **Hardware** - see 1a. 2b. **Software** - a computer program.

B. Instructional Topics and Key Points

TOPIC	KEY POINT
3. Disk Operating systems	3a. **MS-DOS** - IBM pc's and clones 3b. **PC-DOS** - IBM pc's and clones (slight differences between it and MS-DOS). 3c. **UNIX** -another type of DOS. 3d. **OS/2** - new DOS for IBM's allows programs to run concurrently. 3e. **CP/M** - old DOS.
4. Bootstrap Procedure	4a. Power is applied. 4b. POST - power on self test. Checks memory and hardware. 4c. A certain portion of OS begins to run. 4d. Tries to find DOS first at A: and then at C:, if it can't find (old machines start cassette BASIC; newer machines state "non-system disk error"). 4e. If DOS is found, it is loaded into the top end of RAM. This part of DOS is contained in a file called "command.com". 4f. DOS searches for a file called AUTOEXEC.BAT, and if found, commands within it are executed. 4g. Finally, DOS prompt is executed.
5. DOS Command Types	5a. Two types of DOS commands: **resident** - those commands which are contained in command.com; these commands are available to the user at all times. **programs** - those "commands" which must be loaded into RAM prior to executing. Factors to programs: how big, how often).
6. Common Filenames and extensions	6a. **Filenames** - command.com & autoexec.bat 6b. **Extensions** - .BAT - batch files .EXE & .COM - programs .TXT .ME .DOC .DAT - text or ASCII files.
7. General Format DOS commands	7a. <Command-Verb>, parameters, for switches.

B. Instructional Topics and Key Points

TOPIC	KEY POINT
8. Disk and Disk Drives	8a. Three sizes of disks/disk drives: 8 1/2", 5 1/4", 3 1/2". 8b. Two types of disk drives for each size of disks: high and low density.
9. FORMAT	9a. **FORMAT** command - program which performs the following functions: 1. Writes empty tracks on disk. 2. Creates an empty directory. 3. Creates a FAT 9b. /S - switch to include system files on disk when formatting (2 hidden files and command.com). 9c. 5 1/4" 360K N:9 T:40 LO 1.2M N:15 T:80 HI 3 1/2" 720K N:9 T:80 LO 1.44M N:18 T:80 HI 9d. Rules for formatting disks: 1. Low density drives can only format a disk to low density; high density drives can format both. 2. A high density drive will format a disk to hi density (default). 3. If a disk is low density in a hi density drive, disk will default format to 1.2M; can't reformat later on.
10. Disk Handling Techniques	10a. Don't bend disks. 10b. Don't expose disk to extreme temperatures. 10c. Don't write on disk with a hard pen or pencil. 10d. Don't touch exposed areas of disk. 10e. Keep disk away from ashes, dust, etc. 10f. Keep disk away from magnetic fields. 10g. Keep disk in protective jacket when not in use. 10h. Do not remove disk from drive when drive red indicator light is illuminated.

B. Instructional Topics and Key Points

TOPIC	KEY POINT
11. Changing Logical Drives	11a. To change from one logical drive to another, at the prompt enter the drive letter followed by a semicolon.
12. DIR Command	12a. **DIR** - Lists the current or specified directory contents, if any, and the number of free bytes of space on the specified drive. 12b. /P - switch for partial listing. 12c. /W - for width of screen listing. 12d. Accepts wildcards but does not display hidden files.
13. TYPE Command	13a. **TYPE** - Displays the contents of a ASCII file to the screen. To pause hit pause or CTRL S. 13b. Will work with .BAT files, but not with .COM and .EXE files. 13c. Doesn't accept wildcards.
14. Creating and Deleting Sub-directories	14a. **MD** or **MKDIR** - makes a subdirectory at the specified place. 14b. **RD** or **RMDIR** - removes a subdirectory at the specified place. Can't remove subdirectory unless directory is empty.
15. Changing Directories	15a. **CD** or **CHDIR** - Changes from the current directory to the specified directory. 15b. CD\ - puts you @ root. 15c. CD displays the current path. 15d. Include path to specify a new directory.
16. Copying Files	16a. **COPY** - will copy one or more files from one disk or directory to another. Accepts wildcards. /V - verifies copy /B - ignores ASCII EOF and uses file size instead.

B. Instructional Topics and Key Points

TOPIC	KEY POINT
16. Copying Files (continued)	16b. **XCOPY** - will copy files selected by date, archive setting, or directory. /A - only copies files whose archive bit is set. /D - only copies files dated on or after the date specified. /E - copies empty subdirectories to target disk. /P - prompts with Y/N before each copy. /S - Creates subdirectories as needed and copies all subdirectories and contents as required. /W - pauses XCOPY so you can insert source and target disks. 16c. **DISKCOPY** - makes an exact copy of one disk to another. Replaces the contents of the target disk with the contents of the source disk. Al empty tracks on source are also written. /1 - copies only the first side of the disk.
17. Erasing Files	17a. **DEL** or **ERASE** - erases on or more files from a disk. Accepts wildcards. Cannot erase hidden or read-only files.
18. Proper File Management Techniques	18a. Explain the importance of proper management techniques when working with computer files. Such techniques should include grouping of logically related files and programs, backing up files/programs and systems, and removing unwanted or old files.
19. The Prompt Line	19a. Displays where you are in the logical drive and subdirectories. May be turned off. Followed with a > sign.

B. Instructional Topics and Key Points

TOPIC	KEY POINT
20. COMMAND.COM & AUTOEXEC.BAT	20A. COMMAND.COM - file which contains all of the resident DOS commands. 20b. AUTOEXEC.BAT - file which, if present, will automatically run during the bootstrap procedure.
21. COM: and LPT1:	21a. Standard I/O devices: 21b. COM: indicates the screen during output, and the keyboard during input. 21c. LPT1: indicate the printer during output.
22. Redirection of Standard I/O	22a. Done with > sign. 22b. Specifies other places for I/O to go other than the default places.
23. Batch Files	23a. File which contains DOS commands to execute. Must use extension .BAT. may include comments with REM statements. Can enter a batch file directly from the keyboard, or using EDLIN or some other editor.
24. How to run an unknown program	24a. Insert disk into drive. 24b. Do a directory. 24c. Change to subdirectories as required. 24d. Find documentation files. 24e. Print out documentation files. 24f. Read documentation. 24g. Find program. 24h. Run program.
25. Other DOS Commands	25a. **SYS** - Transfers the hidden DOS files to a specified disk. 25b. **RENAME** - Changes the name of the file. 25c. **VER** - Displays the version number of the DOS presently being run. 25d. **CHKDSK** - Checks the integrity of a disk or file and displays a status report. /F - will fix errors if detected. /V - will display all file and subdirectory names.

B. Instructional Topics and Key Points

TOPIC	KEY POINT
25. Other DOS Commands (continued)	25e. **COMP** - Compares the contents of two files and reports the differences. 25f. **TIME** - Displays the current system time of day. 25g. **VERIFY** - Displays the current status of the write verify switch, or turns the switch on or off. 25h. **SUBST** - Allows for a new drive to be substituted for an existing drive and path. 25i. **SORT** - Program which will read text from a standard input device, sort it, and print it to the standard output device. /R - sorts in reverse order. /+(n) - sorts a column specified by n. 25j. **PROMPT** - Changes the prompt. (refer to DOS manual for available characters). 25k. **BACKUP** - Makes a backup copy of files and subdirectories to a backup disk. /S - Backs up all files and directories in specified subdirectory. /M - backs up only those files that have been modified since the last backup was executed. /D - backs up only those files which are during or after the specified date. /F - Formats will backing up. /L - creates a log file. 25l. **CLS** - Clears the screen. 25m. **DATE** - Displays the current date set in the system. 25n. **DISCOMP** - compares the contents of two disks. /1 - limits comparison to 1 side 25o. **PATH** - Displays or changes the current path. 25p. **PRINT** - sends files to the printer.

DOS FEEDBACK INSTRUMENT

NAME:_____

Fill In The Blank:

For each of the following questions, provide the word or words which best answer the question. Place your answer in the provided space.

1. The DOS command which displays the contents of a subdirectory on the screen is _____.
2. The DOS command which displays the contents of a text file or ASCII file to the screen is _____.
3. The DOS command which creates a subdirectory is _____.
4. The DOS command which erases a subdirectory is _____.
5. The DOS command which will take you to the root directory of the current disk is _____.
6. The keyboard key(s) which will recall the last DOS command is/are _____.
7. The keyboard key(s) which will warm boot the computer is/are _____.
8. The file on your disk which contains all of the resident DOS commands is _____.
9. The DOS command which will display the current version of DOS presently running on your computer is _____.
10. The DOS command which will remove a file from your disk is _____.

Short Answer:

To answer each of the following questions, please refer to the attached drawing. Provide the **shortest** possible answer.

11. If you were in the MR subdirectory, what would your command prompt look like? _____.
12. If you were in the WORD subdirectory, what would you command prompt look like? _____.

Short Answer: (continued)

13. Please list all of the files which are programs:

14. Please list all of the files which are ASCII files:

15. Suppose you were in the root directory. What command would you enter to move to the MR subdirectory?

16. Suppose you were in the root directory. What command would you enter to start the WORD word processing program?

17. Suppose you were in the root directory. What would you do to erase the MEMOS subdirectory?

18. Suppose you were in the root directory. How would you move all of the .DAT files from the MR subdirectory to the PW subdirectory?

19. Suppose you were in the MR subdirectory. How would you get to the DOCS subdirectory?

20. Suppose you were in the MR subdirectory. How would you get to the WPRO subdirectory?

21. Suppose you were in the DOCS subdirectory. How would you remove the NU.EXE file?

22. Suppose you were in the WORD subdirectory. How would you display the contents of the subdirectory? What would you see displayed?

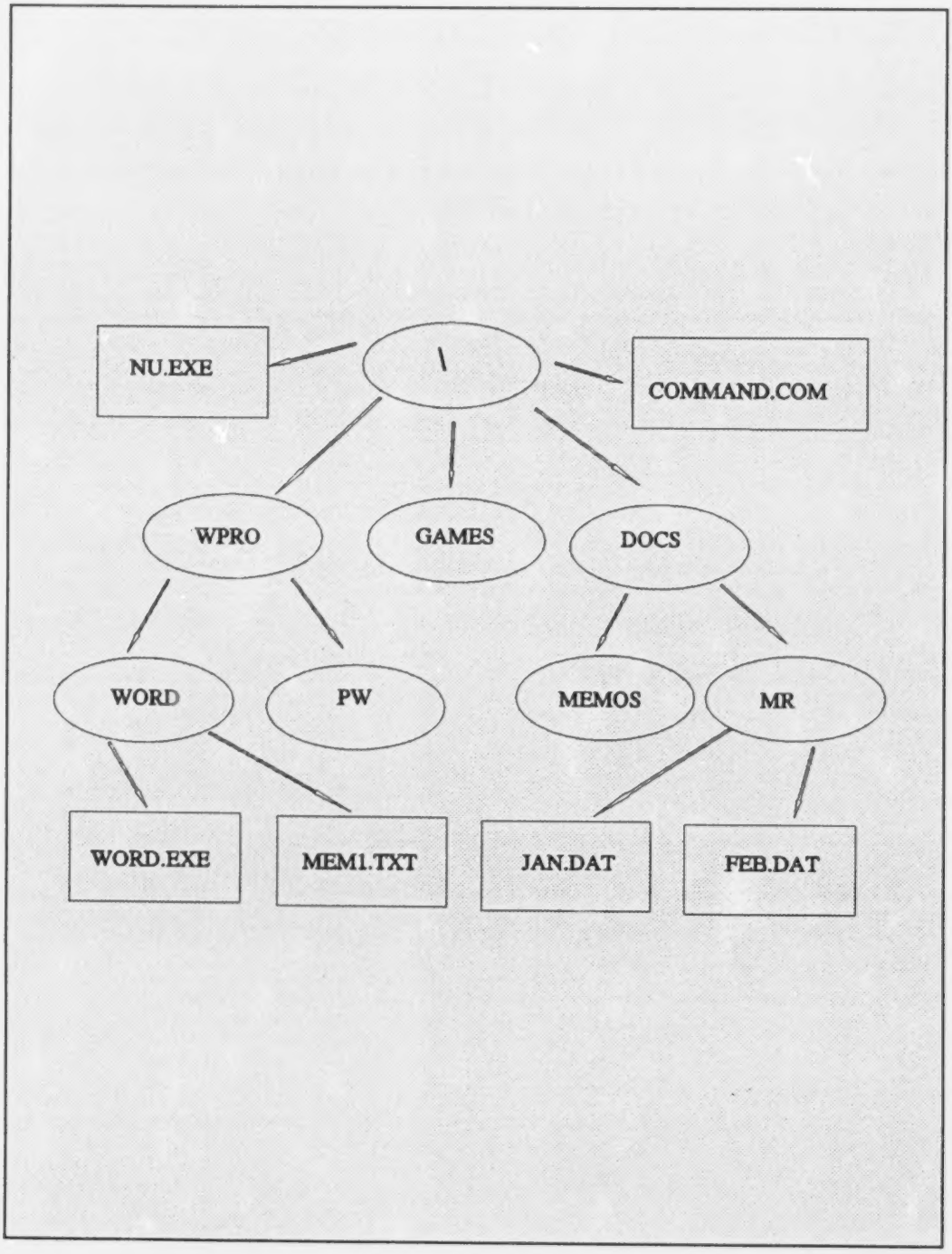
23. Suppose you were at the root directory. How would you create a new subdirectory under GAMES called "FOOTBALL"?

24. Suppose you were in the root directory. How would you copy the .DAT files to drive B:'s root directory?

25. Suppose you were in the MR subdirectory. How would you start the WORD word processing program?

BONUS

Refer to the attached drawing. Explain how would you erase all files and subdirectories on the disk.


NU.EXE
\
COMMAND.COM
WPRO
GAMES
DOCS
WORD
PW
MEMOS
MR
WORD.EXE
MEM1.TXT
JAN.DAT
FEB.DAT

DOS FEEDBACK INSTRUMENT

MASTER

Fill In The Blank:

For each of the following questions, provide the word or words which best answer the question. Place your answer in the provided space.

1. The DOS command which displays the contents of a subdirectory on the screen is **DIR**

2. The DOS command which displays the contents of a text file or ASCII file to the screen is **TYPE**

3. The DOS command which creates a **subdirectory** is **MD** or **MKDIR**

4. The DOS command which erases a **subdirectory** is **RD** or **RMDIR**

5. The DOS command which will take you to the root directory of the current disk is **CD**

6. The keyboard key(s) which will recall the last DOS command is/are **<F3>**

7. The keyboard key(s) which will warm boot the computer is/are **<CTRL> <ALT> <DEL>**

8. The file on your disk which contains all of the resident DOS commands is **COMMAND.COM**

9. The DOS command which will display the current version of DOS presently running on your computer is **VER**

10. The DOS command which will remove a file from your disk is **DEL** or **ERASE**

Short Answer:

To answer each of the following questions, please refer to the attached drawing. Provide the **shortest** possible answer.

11. If you were in the MR subdirectory, what would your command prompt look like? **A:\DOCS\MR>**

12. If you were in the WORD subdirectory, what would your command prompt look like? **A:\WPRO\WORD>**

Short Answer: (continued)

13. Please list all of the files which are programs:
NU.EXE WORD.EXE COMMAND.COM

14. Please list all of the files which are ASCII files:
MEM1.TXT JAN.DAT FEB.DAT

15. Suppose you were in the root directory. What command would you enter to move to the MR subdirectory?
A:\>CD \DOCS\MR or A:\>CD DOCS\MR

16. Suppose you were in the root directory. What command would you enter to start the WORD word processing program?
A:\>\WPRO\WORD\WORD

17. Suppose you were in the root directory. What would you do to erase the MEMOS subdirectory?
A:\>RD \DOCS\MEMOS

18. Suppose you were in the root directory. How would you move all of the .DAT files from the MR subdirectory to the PW subdirectory? **A:\>COPY \DOCS\MR*.* \WPRO\PW**
A:\>DEL \DOCS\MR*.*

19. Suppose you were in the MR subdirectory. How would you get to the DOCS subdirectory?
A:\DOCS\MR>CD..

20. Suppose you were in the MR subdirectory. How would you get to the WPRO subdirectory?
A:\DOCS\MR>CD\WPRO

21. Suppose you were in the DOCS subdirectory. How would you remove the NU.EXE file?
A:\DOCS>DEL \NU.EXE

22. Suppose you were in the WORD subdirectory. How would you display the contents of the subdirectory? What would you see displayed? **A:\WPRO\WORD>DIR**
WORD EXE
MEM1 TXT

23. Suppose you were at the root directory. How would you create a new subdirectory under GAMES called "FOOTBALL"?
A:\>MD \GAMES\FOOTBAL

24. Suppose you were in the root directory. How would you copy the .DAT files to drive B:'s root directory?
A:\>COPY \DOCS\MR*.* B:

25. Suppose you were in the MR subdirectory. How would you start the WORD word processing program?
A:\DOCS\MR>\WPRO\WORD\WORD

BONUS

Refer to the attached drawing. Explain how would you erase all files and subdirectories on the disk.
FORMAT A:

DOS ATTITUDE FEEDBACK INSTRUMENT

In order for us to gain a better understanding of how informative this workshop has been for you, please answer the following questions. Please answer each question honestly.

This instrument will be used to make changes to this workshop, so that persons participating in future workshops can gain a better understanding of DOS.

For each of the following questions, please circle your indicated answer using the provided scale, where 1 is poor and 5 is outstanding.

	Poor 1	2	Avg. 3	4	Outstanding 5
1. Overall, how would you rate the quality of the workshop.	1	2	3	4	5
2. How would you rate the quality of instruction.	1	2	3	4	5
3. How helpful in your present job position will the items that were covered during the workshop be.	1	2	3	4	5
4. Of what quality were the hands-on exercises.	1	2	3	4	5
5. How would you rate the organization of the workshop (i.e. time, correspondence, etc)	1	2	3	4	5

6. What part of the workshop do you feel was most beneficial to you and why?

7. What part of the workshop would you like to see changed, and why?

8. Please add any other comments, if any, you have about the workshop on the reverse side of this instrument.